

**28 APRIL 1998**



**Safety**

**STANDARDIZED OO-ALC MISHAP  
PREVENTION PROGRAM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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## Chapter 1

### GENERAL

#### *Section 1A—Command Responsibilities*

**1.1. Air Force Safety Policies:** *AFI 91-202, USAF Mishap Prevention Program*, establishes the Air Force policy and designates the Air Force activities responsible for implementing the Air Force Safety Program. Air Force policy applicable to all commanders is:

- 1.1.1. Safety is a commander's responsibility.
- 1.1.2. The motivation for an active and effective safety program must be provided by each commander.
- 1.1.3. Each member of the commander's staff will implement the commander's safety program within his/her respective functional area.

**1.2. Commander's (Directors) Responsibilities:** Commanders at every echelon are responsible for implementing applicable portions of this instruction.

- 1.2.1. Commanders of all units will notify the Command Post, (7-3007), immediately in the event of a major mishap as outlined in *AFI 91-204, Safety Investigations and Reports*, and *JCS Pub 6, Volume V, JRS*. In addition, ensure the Command Section and OO-ALC/SE are aware of incidents that have a high potential for serious injury or damage.

#### *Section 1B—Safety Responsibilities*

**1.3. Introduction.** The objective of the OO-ALC Safety Program is to accomplish the mission of the OO-ALC unit without accidental injury to or loss of personnel, facilities, or equipment. Specific programs have been developed and implemented to:

- 1.3.1. Prevent aircraft, ground, and weapons mishaps.
- 1.3.2. Eliminate or minimize the effects of design deficiencies that may lead to mishap potentials. Ensure that proposed future equipment and facilities are reviewed for compliance with USAF, and other applicable standards.
- 1.3.3. Eliminate unsafe acts and errors of procedure and personnel that may lead to mishap potential.
- 1.3.4. Accomplish the goals of nuclear safety by providing safety and security to the nuclear systems, procedures, and components for which OO-ALC has responsibility.
- 1.3.5. Prevent accidental damage or destruction of all equipment, facilities, and properties assigned to or under OO-ALC jurisdiction.

**1.4. Safety Office (OO-ALC/SE).** Administration, direction and coordination of the OO-ALC Safety Program is accomplished by the Safety Office, which is directly responsible to the OO-ALC Commander. OO-ALC/SE will implement and monitor the program by means of the following tasks:

- 1.4.1. Provide safety assistance and consultation to the OO-ALC Commander, staff offices, directorates, and tenant units.

1.4.2. Ensure establishment of a viable overall OO-ALC Safety Program to include: Ground, Flight, Systems, and Weapons Safety.

### **1.5. Responsibilities of Functional Manager.**

1.5.1. Select qualified and motivated individuals to administer the unit safety program.

1.5.2. Develop a written safety policy letter.

1.5.3. Ensure unit's safety training processes comply with this regulation.

1.5.4. Ensure mishaps are reported in accordance with paragraph 1.7.

1.5.5. Take immediate action to secure and not disturb mishap scenes until a determination is made by a safety professional regarding investigative requirements (in the event of a ground or weapons mishap). Exceptions will be made when mishap scene must be disturbed due to actual safety concerns at the scene, in the opinion of the on-scene commander.

1.5.6. Ensure unit hazard abatement program functions properly as established in *AFI 91-301, Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*. Fire Protection Division (75CEG/CEF) manage the Fire Safety Deficiency program.

1.5.7. Ensure corrective actions in safety mishap investigation reports are completed.

1.5.8. Support safety professionals and safety representatives on issues concerning safety.

1.5.9. Ensure safety briefings are provided to visitors, volunteers, and new personnel.

### **1.6. Hazard Reporting Program.**

1.6.1. Program Promotion: *AFI 91-202, The US Air Force Mishap Prevention Program*, encourages any person, military or civilian, assigned or attached to the Air Force, or under contract to the Air Force to report a hazard. Supervisors will brief the program to all employees, along with specific instructions on how to report hazards. Blank copies of *AF Form 457, USAF Hazard Report*, will be readily available.

1.6.2. Reporting Procedures: Report hazards to the responsible unit supervisor, unit safety representative or ALC safety professional. If the hazard is eliminated on the spot, no further action is required unless it applies to other similar operations. Reports may be anonymous. Imminent danger situations must be reported verbally, at least initially, so that action can be taken without delay. Hazards should be corrected at the lowest possible working level. Hazards may be reported in writing to OO-ALC/SE by submitting an *AF Form 457* to OO-ALC/SE.

### **1.7. Mishap Notification, Investigation, Reporting and Record Keeping.**

1.7.1. Scope. Air Force mishaps are investigated in accordance with *AFI 91-204, Investigating and Reporting US Air Force Mishaps*, to find their causes in order to prevent recurrence. This section provides OO-ALC implementation instructions for *AFI 91-204*.

1.7.2. Mishap Notification. All mishaps are reportable, regardless of severity, involving on-duty or off-duty military personnel, on-duty civil service personnel, volunteers performing work for the Air Force, or Air Force assets, which result in injury, illness or damage. The severity of injuries and dollar costs associated with the mishap will determine the notification procedures and timelines that

apply. Figure 1.1. provides a simplified outline for mishap classification. Immediate notification by the supervisor is required for all Class A and B mishaps and for all mishaps or incidents that are likely to generate a high level of public or Command interest due to their nature or sensitivity. Notify the Command Post at 7-3007. During duty hours, also notify OO-ALC/SE at 7-3333. Do not delay notification due to a lack of information; relay whatever is available at the time. The *AFMC Form 12, Record of Injury/Illness and Treatment*, process will constitute notification for minor injury mishaps. Units will establish written internal mishap notification procedures, which will be briefed to all personnel and documented as part of their initial newcomer safety orientation. Routine mishap and incident notification should be made through the unit safety professional or safety representative, who in turn will notify OO-ALC/SE.

( Figure 1. 1.) Mishap Classes.

Class A: \$1,000,000 or more in property or equipment damage and/or fatality or permanent total disability.

Class B: \$200,000 to \$999,999 property or equipment damage and/or permanent partial disability or hospitalization of 3 or more personnel in one event.

Class C: \$10,000 to \$199,999 property or equipment damage and/or injury resulting in a lost duty day (not counting day of injury).

Class D: \$2000 to \$9,999 property or equipment damage or any injury resulting in less than 8 hours of lost time that does not qualify as a Class C mishap.

Class X: An occupational injury not reportable, but recordable according to *AFI 91-204*.

Class N: Any non-reportable event that does not meet above class criteria, that OO-ALC/SE needs to record for trend analysis.

**1.8. Mishap Investigation.** OO-ALC/SE accomplishes all class A, B, or C mishap investigations, not requiring a formal safety investigation board, with assistance from the unit experiencing the mishap. Investigation is aided by the on-scene commander's preservation of the mishap scene until the investigating officer releases the site unless the mishap scene must be disturbed for safety reasons. Base Photographer (7-7615) should take photographs, prior to movement of items. Witnesses to the mishap should be identified and asked to wait until interviewed by the investigating officer (do not detain non-DOD personnel if they are unwilling to wait, simply get their name and telephone number). The unit safety professional or safety representative and the supervisor of the area may investigate class D, or N mishaps. The results of their investigation will be sent to OO-ALC/SE. The safety professional or safety representative will track recommended actions from both formal and informal mishap investigations to ensure they are properly closed and forwarded to OO-ALC/SE.

**1.9. Safety Assessments and Inspections.** OO-ALC/SE Annual Assessments and Inspections: OO-ALC/SEG, OO-ALC/SEW and OO-ALC/SEF conduct an annual safety assessments and inspections of all host units and selective tenant units per agreement. Assessments and inspections include two primary areas: safety program management (host base units only) and facility/operations safety. The program management assessment evaluates the unit's compliance with safety program requirements. The annual inspection will be a summary of facility/equipment/operations safety inspections accomplished by spot inspections throughout the year. The annual inspection summary will provide an overview and trends of the spot inspections and high interest inspections.

**1.10. Identification and Inspection of High Interest Areas.** High Interest Areas are those locations where, due to the processes or equipment in use, there is a greater frequency of observation necessary to ensure an adequate level of safety. Those areas are identified by the Base Safety Specialist responsible for the area. A Base Safety Specialist will inspect each High Interest Area at least once each calendar month. The inspection will focus on the specific, unique processes and/or equipment that caused the area to become a High Interest Area.

**1.11. Inspection Follow-up.** Hazards identified during Base Safety spot inspections must be abated within 30 days or entered into the unit's *open inspection items list*. A follow-up inspection will be conducted within 30 days by the Safety Professional or Safety Representative, or the Base Safety Specialist to verify adequacy of abatement actions. Open items will be followed-up by the Safety Professional or Safety Representative, or the Base Safety Specialist at least every 60 days to completion. The status of follow-up actions will be documented in the computerized inspection program maintained by OO-ALC/SE.

**1.12. Unit Inspections .** Each unit Safety Professional or Safety Representative conducts spot inspections of assigned facilities throughout the year. The exact number or frequency of spot inspections can not be defined before hand; therefore, the professional judgment of the Safety Professionals must be relied upon. It will depend upon the size of the facility, the mishap history of the facility, and the complexity of the processes/operations accomplished within the facility. The results of these spot inspections will be reviewed by OO-ALC/SE during the annual program assessment to assist in evaluation of the unit safety program. Hazards that are not corrected within 30 days will be transferred to the unit's *open inspection items list*.

**1.13. Safety Policy Statement .** There is no specific format to be followed when writing a functional manager's safety policy statement. This policy statement will be briefed to all personnel within the unit.

## Chapter 2

### FLIGHT SAFETY

**2.1. Introduction.** The purpose of the OO-ALC flying safety program is to protect personnel and conserve Air Force resources through a coordinated and continuing mishap prevention effort. This is accomplished by identifying activities and conditions, which could contribute to a mishap and eliminate or minimize their hazard potential. Because the Flying Safety Officer does not have the authority to take actions directly on his own, this program relies on the aggressive support of knowledgeable and motivated commanders and supervisors. The OO-ALC Flight Safety program is based on duties, responsibilities, and program elements specified in *AFI 91-202*, *AFI 91-204*, *OO-ALC-HAFB Instruction 13-201*, *Air Traffic Control and Flight Operations*, and additional actions as outlined below.

#### **2.2. Responsibilities of OO-ALC Flying Safety Officer (SEF).**

- 2.2.1. Ensure the implementation of this flight safety program by subordinate units.
- 2.2.2. Ensure the preparation of a pre-accident plan.
- 2.2.3. Conduct/assist in a monthly aircraft mishap prevention meeting in accordance with *AFI 91-202* and *AFMC Sup 1*.
- 2.2.4. Conduct spot inspections of functions, which impact flying safety.
- 2.2.5. Establish procedures for timely distribution of safety directives, mishap prevention materials, letters, messages, and flying safety magazines.
- 2.2.6. Provide support to unit and tenant Flying Safety Officers.
- 2.2.7. Train, advise, and assist investigating boards.
- 2.2.8. Ensure that mishap investigator kits are kept up-to-date.
- 2.2.9. Report facility deficiencies and other problems having a negative effect on flying safety to appropriate offices.
- 2.2.10. Maintain a flying safety library.
- 2.2.11. Participate in the investigation of mishaps.
- 2.2.12. Submit required mishap reports.
- 2.2.13. Ensure that adequate corrective action is taken following an OO-ALC aircraft mishap. Coordinate environmental issues with Environmental Management Directorate (OO-ALC/EM). Maintain a corrective action folder on each OO-ALC mishap.
- 2.2.14. Participate in pre-award surveys.
- 2.2.15. Process USAF hazard reports in accordance with *AFI 91-202 and 91-204*.
- 2.2.16. Actively participate in Air Traffic Control (AOB) Meeting, Foreign Object Damage (FOD) Prevention Council, and other safety-committees and councils as required.
- 2.2.17. Participate on OO-ALC Test Evaluation Board/Flight Test Planning Meetings.

#### **2.3. Responsibilities of the Air Base Wing Commander (75 ABW/CC).**



- 2.3.1. Support the OO-ALC flying safety mishap prevention program.
- 2.3.2. Coordinate with the OO-ALC Flying Safety Officer in eliminating operational flying hazards.
- 2.3.3. Ensure that Base Operations maintains close liaison with the Flight Safety Division (OO-ALC/SEF).
- 2.3.4. Provide support in accordance with *AFI 91-204* or requested by the OO-ALC Flying Safety Officer during mishap investigations.

#### **2.4. Responsibilities of the Aircraft Directorate (LA).**

- 2.4.1. Support the OO-ALC flying safety mishap prevention program.
- 2.4.2. Provide support requested by OO-ALC/SE during mishap investigations and aircraft retrieval.
- 2.4.3. Ensure that flying safety is specifically addressed in monthly safety meetings of units supporting the LA flying operation.
- 2.4.4. Ensure that maintenance personnel report any aircraft incident/mishap immediately to their supervisor.
- 2.4.5. Ensure that maintenance control, quality control, and/or debriefing teams immediately inform the Flying Safety Officer of any mishap, incident, or safety discrepancy.
- 2.4.6. Coordinate with the Flying Safety Officer in detecting and eliminating potential mishap areas.
- 2.4.7. Ensure Category I Materiel Deficiency Reports are submitted in accordance with TO 00-35D-54 and a copy forwarded of all Category I reports originating in OO-ALC/LA to OO-ALC/SEF.
- 2.4.8. Ensure implementation of unit and command corrective action for all identified deficiencies or hazards.
- 2.4.9. Maintain an effective Foreign Object Damage (FOD) control program.

#### **2.5. Responsibilities of the Commander, Medical Group (75 MDG).**

- 2.5.1. Provide necessary support for the flying safety mishap prevention program.
- 2.5.2. Ensure that flight surgeons make frequent visits to all flying activities and actively take part in flying safety meetings.
- 2.5.3. Coordinate with OO-ALC/SEF in detecting and eliminating flying safety hazards.
- 2.5.4. Ensure, where possible, that flight surgeons accomplish some of their flying requirements with each flying unit for which they are responsible.
- 2.5.5. Spot check the personal equipment sections to ensure that safe standards are established and maintained.

#### **2.6. Responsibilities of the Base Operations (75 OSS).**

- 2.6.1. Support the flying safety mishap prevention program.
- 2.6.2. Ensure that all USAF Hazard Reports and Hazardous Air Traffic Reports (HATR) submitted to 75th OSS are forwarded expeditiously to OO-ALC/SEF.

2.6.3. Coordinate with the Flying Safety Officer in detecting and eliminating flying hazards in both the operational and transient alert areas.

**2.7. Responsibilities of the Chief, Transient Alert (75 OSS/OSCT).**

2.7.1. Support the flying safety mishap prevention program.

2.7.2. Ensure that transient alert personnel report immediately to their supervisors any aircraft incident/mishap, who will immediately inform OO-ALC/SEF.

2.7.3. Coordinate with the Flying Safety Officer in detecting and eliminating potential mishap areas.

2.7.4. Ensure personnel are trained in mishap response and equipment used during in-flight emergencies/mishaps landing at Hill AFB.

**2.8. Responsibilities of the Unit Flying Safety Officer.**

2.8.1. Receive appointment in writing from the unit commander.

2.8.2. Develop mishap prevention awareness within his/her unit.

2.8.3. Identify mishap generating factors, such as poor supervision, inadequate aircrew training, crew rest, scheduling procedures, and aircrew knowledge of aircraft and emergency operating procedures.

2.8.4. Establish procedures for reporting mishaps and incidents and USAF hazard reports by aircrew and maintenance personnel.

2.8.5. Monitor survival and life support equipment programs.

2.8.6. Maintain a current, attractive, effective safety bulletin board.

2.8.7. Ensure understanding of the weapon system safety procedures. Monitor written or oral examinations given by unit standardization/evaluation personnel to determine comprehension of this material.

2.8.8. Assist in conducting safety surveys of other units on base when requested.

## Chapter 3

### GROUND SAFETY

**3.1. Introduction.** The primary mission of the Ground Safety Program is to reduce and maintain at an absolute minimum, the number and severity of injury and property damage mishaps. This goal will be achieved through a program involving the ALC safety staff, directorate safety professionals, unit safety (additional duty) representatives, management and supervision at all levels, and the individual employee. The program involves all military personnel both on and off duty; civilian employees during duty hours; non-appropriated fund personnel during duty hours; contractors while performing work on OO-ALC controlled land resources; contract operations on government materials under OO-ALC cognizance, volunteers performing Air Force work, and, to a lesser extent, dependent personnel residing on base.

**3.2. Responsibilities of the Ground Safety Staff.** To accomplish the stated goals OO-ALC/SEG will:

- 3.2.1. Advise the commander and staff (including middle management) on safety matters.
- 3.2.2. Administer special safety programs as outlined by higher headquarters.
- 3.2.3. Develop, document, and implement the ground/industrial mishap prevention programs.
- 3.2.4. Develop safety policies, plans, implementing instructions, operating instructions (OI), and supplements to safety instructions and manuals.
- 3.2.5. Ensure compliance with established safety directives by OO-ALC, base, and tenant units.
- 3.2.6. Provide publicity items such as posters and special speakers and timely articles for inclusion in the Hilltop Times and other publications.
- 3.2.7. Review *AFMC Forms 12*, admissions and disposition (A&D) sheets, police blotters, and other documents to ensure all mishaps are evaluated and coordinated with directorate safety professionals or unit safety representatives and entered into the mishap data base.
- 3.2.8. Conduct mishap investigation and reporting.
- 3.2.9. Prepare commander's personal reports and endorsements for major ground mishaps.
- 3.2.10. Investigate and analyze non-reportable mishaps to determine trends and prevent further mishaps.
- 3.2.11. Conduct inspections, formal and unscheduled, and perform follow-up action.
- 3.2.12. Follow-up on higher headquarters inspections/evaluations.
- 3.2.13. Provide safety engineering technical advice and assistance to all OO-ALC base and tenant units. Review *AFMC Forms 299, Safety Fire and Health Review*, submitted by OO-ALC/LA, Commodities Directorate (OO-ALC/LI), ICBM Systems Program Office (OO-ALC/LM), Technology and Industrial Support Directorate (OO-ALC/TI), and 75 ABW as per *AFI 91-301 AFMC Sup 1*.
- 3.2.14. Review locally developed directives, OIs, checklists, etc., for safety implications and provide guidance through proper interpretation of directives, policies, and standards.
- 3.2.15. Review and coordinate on the response and corrective actions made to unsatisfactory reports (UR). Review and coordinate on selected *AFMC Forms 252, TO Publication Change Request*, and other related technical data changes that impact safety

- 3.2.16. Validate and coordinate on waiver requests.
- 3.2.17. Review, evaluate, and coordinate on suggestions with safety impact.
- 3.2.18. Provide safety evaluation and validation of *AF Form 332, Base Civil Engineer Work Request*.
- 3.2.19. Evaluate personal protective equipment (PPE) programs.
- 3.2.20. Support appropriate committees, boards, task groups, and monthly unit meetings.
- 3.2.21. Review and coordinate on new construction and facility modification plans/drawings.
- 3.2.22. Provide guidance to OO-ALC units regarding safety provisions in contractual documents. Provide appendix C's or Tab C's (safety requirements) on applicable contracts and organic projects. Furnish safety requirement guidance for pre-perform, pre-award meetings, and accomplish pre-award and post-award surveys, as required.
- 3.2.23. Provide motor vehicle mishap prevention support.
- 3.2.24. Distribute information received from ALSAFECOM messages and ensure proper corrective action is taken.
- 3.2.25. Maintain a continuing safety educational and training program. The following courses from the OSHA Training Institute are recommended as a "core" of training for all ground safety professionals:
  - OSHA 203 Basic Electrical Principles (or OSHA 309A Electrical Standards)
  - OSHA 204A Machinery and Machine Guarding Standards
  - OSHA 207A Fire Protection and Life Safety
  - OSHA 208 Cranes and Materials Handling for General Industry
  - OSHA 225 Principles of Ergonomics
  - OSHA 226 Permit-Required Confined Space entry
  - OSHA 601 Occupational Safety and Health Course for other Federal Agencies
- 3.2.26. Maintain a safety technical library.
- 3.2.27. Maintain and analyze records of mishap trends and statistical information. Furnish statistical data to requesting units.
- 3.2.28. Review Workers Compensation reports.
- 3.2.29. Maintain a recreational, sport, and off duty safety program.
- 3.2.30. Assist commanders, directors, and staff officers in providing all management and supervisory levels with training, education and counsel related to safety.
- 3.2.31. Establish the Air Force Occupational Safety and Health (AFOSH) council as outlined in *AFI 91-301*. Make council arrangements, develop the schedule, distribute the agenda in advance, and record and publish the council minutes.
- 3.2.32. Participate in ergonomics working groups chaired by OO-ALC/SGP.

**3.3. Responsibilities of Commanders, Directors, and Staff Officers.** Commanders, directors and staff officers are responsible for the safety of personnel and operations within their units. They will implement a continuing ground/industrial mishap prevention program designed to reduce the number and severity of ground and industrial mishaps. To achieve the goals of this program they will:

3.3.1. Appoint in writing, an "additional duty" ground/industrial safety representative for those units without a safety professional on the staff. A copy of the appointment letter should be forwarded to SEG showing name, grade, office symbol, and duty phone. This individual, or the safety professional, will be responsible to work with SEG to achieve the requirements of the Air Force and ALC safety program. Ensure the additional duty person attends Supervisor Safety Training as soon as possible after being appointed. Either one of the following two courses taught by the OSHA Training Institute is recommended for additional-duty ground safety personnel in industrial areas such as (LGS, LGT, CEG, MUNS, CLSS): 600 Collateral Duty Course for other Federal Agencies or 601 Occupational Safety and Health Course for other Federal Agencies. The following additional courses are recommended for the Civil Engineer Group additional duty ground safety person: 301 Excavation, Trenching and Soil Mechanics, and 501 Occupational Safety and Health Standards for the Construction Industry.

3.3.2. Publish supplements, instructions, and OIs in the safety series, MOIs, checklists, or other directives as needed to implement and control the ground/industrial safety program.

3.3.3. Ensure that coordination from OO-ALC/SEG is obtained on all of the above documents and any other official document, which has safety implications.

3.3.4. Ensure compliance with appropriate safety regulations.

3.3.5. Ensure that the safety program is given adequate publicity through use of posters, bulletins, letters, and other safety materials.

3.3.6. Remain cognizant of all ground/industrial mishaps within their units. Maintain reports in the Safety Management Book for one year.

3.3.7. Provide training, education, and counsel concerning safety to all management and supervisory levels. Ensure that AFOSH training requirements are accomplished in accordance with *AFI 91-301*.

3.3.8. Ensure Job Safety Training Outlines have been developed and training has been documented in the individuals AF Form 55, in accordance with *AFI 91-301, paragraph 7.3 and attachment 5*.

**3.4. Responsibilities of Supervisors.** The supervisor will act positively to eliminate any potential hazard within his/her area of responsibility. Each supervisor will:

3.4.1. Maintain an aggressive safety program, with the support of the directorate safety professional or safety representative.

3.4.2. Complete the supervisory copy of *AFMC Form 12* on all injuries and forward to OO-ALC/SEG within 3 workdays. Notify SEG, through the unit safety representative, of any change in disposition of injured employee thereafter.

3.4.3. Include safety training and education in unit meetings and on-the-job training.

3.4.4. Develop Job Safety Training Outlines and train new individuals. Update training outlines when processes or equipment changes. Document training on *AF Forms 55, Employee Safety and Health Record*, in accordance with *AFI 91-301*.

- 3.4.5. Conduct safety meetings on a quarterly basis in administrative units and monthly in industrial areas and warehouses. Document meetings on *AFMC Form 316, Supervisor Safety Meetings Minutes*.
- 3.4.6. Thoroughly instruct employees in safe practices to be observed in their daily operations. Enforce safety standards.
- 3.4.7. Assist in the investigation and reporting of all injury and property damage mishaps.
- 3.4.8. Attend the Supervisor Safety Course.
- 3.4.9. Analyze job tasks for inherent hazards by using established Job Safety Analysis (JSA) procedures, in accordance with *AFI 91-301*.
- 3.4.10. Ensure proper personal protective equipment is provided to their employees and ensure it is properly maintained and used.
- 3.4.11. Act promptly to correct hazards and ensure that uncorrected hazards are reported to the safety professional or safety representative for entry in the unit's hazard abatement program.
- 3.4.12. Conduct supervisor's safety inspections on a quarterly basis in administrative units and monthly in industrial areas and warehouses. Document inspections on *AFMC Form 315, Supervisor Safety Inspection Record*.

### **3.5. Responsibilities of Unit Safety Professionals and Additional Duty Safety Representatives.**

Unit safety professionals and safety representatives (reference paragraph 3.3.1) will:

- 3.5.1. Organize and administer their unit safety program.
- 3.5.2. Act as liaison between OO-ALC/SE and the unit.
- 3.5.3. Prepare and maintain a unit chart of safety representatives.
- 3.5.4. Ensure adequate safety training and technical guidance for management, supervisors, and employees are provided and request assistance from the safety office staff on matters beyond the capability of the unit safety representative.
- 3.5.5. Ensure supervisor's copies of the *AFMC Form 12* are sent to OO-ALC/SEG within 3 working days of the mishap.
- 3.5.6. Disseminate mishap/injury data/statistics to appropriate levels within the units.
- 3.5.7. Brief their commander, director or chief of staff office as required on all safety related items.
- 3.5.8. Attend Safety Cross talk meetings conducted by OO-ALC/SE.
- 3.5.9. Support the AF Form 457 hazard reporting system as requested by OO-ALC Safety Office.
- 3.5.10. Serve as central point of contact for safety within their unit.
- 3.5.11. Comply with all mishap notification requirements.
- 3.5.12. Provide local conditions briefing to all newcomers.

**3.6. Responsibilities of Individual Employees.** All personnel will be responsible for understanding and observing the established safety standards. Each employee should be his/her personal safety monitor. He/she will:

- 3.6.1. Comply with standards, regulations, job guides, technical orders and operating procedures, etc.
- 3.6.2. Report all mishaps to his/her supervisor.
- 3.6.3. Report all observed safety hazards.
- 3.6.4. Establish a personal safety attitude to prevent injury and damage to equipment and property.
- 3.6.5. Use proper personal protective equipment (PPE).
- 3.6.6. Wear seatbelts to include shoulder harness.

**3.7. Responsibilities of Security Forces Squadron (75 SFS).** Chief, Security Forces Squadron will notify OO-ALC/SE of motor vehicle mishaps involving fatal injuries or hospitalization. During duty hours call safety through 7-3333. After duty hours contact the standby safety person via the command post. Security Police will notify OO-ALC/SE of other motor vehicle mishaps involving personal injury, government motor vehicle mishaps or damage to government property, through copies of the *SPOL Form 323*.

## Chapter 4

### WEAPONS SAFETY

#### *Section 4A—Weapons Safety Program*

##### **4.1. General .**

4.1.1. The Ogden ALC Weapons Safety Mishap Prevention Program is an integration of explosives, nuclear, missile, and range safety elements into one cohesive and coordinated program.

4.1.2. The program is designed to provide measures for the early detection, control or elimination of potential hazards associated with all nuclear certified and conventional systems for which OO-ALC has a mission assignment.

##### **4.2. Responsibilities of the Weapons Safety Office (OO-ALC/SEW).**

4.2.1. Administer and coordinate the weapons safety program and represent the OO-ALC Commander on all weapons safety related matters, with the exception of those explosives related responsibilities assigned to Directorates with missions off Hill AFB or its Geographical Separated Units (GSU). Safety personnel assigned to other ALC units or tenants will represent only that level of authority embodied in their unit.

4.2.2. Evaluate the safety of explosives operations. In the event that an unsafe act or hazardous condition is detected during an explosives operation, OO-ALC/SEW has the authority to direct that operation be stopped. The decision to continue the operation, if corrective action is pending or cannot be reconciled, will be determined at the directorate level.

4.2.3. Perform weapons safety program management assessments.

##### **4.3. Specific Tasks (SEW).** Develop and conduct an OO-ALC explosives/missile/nuclear/range safety program. This includes (but is not limited to) the following tasks:

4.3.1. Assist all OO-ALC units (including tenants) in the development and implementation of their internal Weapons Safety Mishap Prevention Program. OO-ALC/SEW will conduct a Quarterly Explosives Safety Interchange Group Meeting with the designated directorate and tenant explosive safety representatives. When possible, the Interchange Meeting will be held at 1500 on the second Thursday of February, May, August, and November. This meeting will provide a forum at which mutual explosives safety problems, new explosives safety requirements and current explosives safety projects can be discussed. OO-ALC/SEW will prepare minutes for each meeting. These minutes will be distributed to each unit.

4.3.2. Plan, schedule, and conduct weapon safety inspections and assessments; monitor follow-up actions and ensure the responsible units take appropriate corrective actions. Annual weapons safety assessments will be accomplished for each directorate having activities concerned with missiles, conventional or nuclear systems. OO-ALC/SEW will maintain the official file of all reports of safety inspections/assessments and the corrective actions taken.



**NOTE:**

These inspections/assessments do not relieve the individual unit of their responsibilities to conduct inspections.

- 4.3.3. Monitor the weapons safety-training program for OO-ALC units. Review and approve explosives and nuclear safety unit course outlines and training plans. Provide advice and assistance in developing training programs. Provide annual training for directorate level and tenant weapons safety representatives, and nuclear safety project officers.
- 4.3.4. Review all procedures involving explosives, missiles and nuclear certified equipment associated with operations conducted by OO-ALC personnel. This includes Explosives Operating Instructions (EOI) or unit equivalent, test directives, implementation management plans, etc.
- 4.3.5. Prepare and publish OO-ALC instructions, directives, supplements, and policies pertaining to the requirements and conduct of the OO-ALC weapons safety program.
- 4.3.6. Process USAF Hazard Reports and monitor corrective actions on those pertaining to weapons safety.
- 4.3.7. Provide a continuous review of ALC weapons safety standards and policies.
- 4.3.8. Develop all explosives site plans.
- 4.3.9. Issue explosives storage licenses (*AF Form 2047, Explosives Facility License*).
- 4.3.10. Monitor the inspection of munition containers and scrap metal known or suspected of being contaminated with explosive materials to ensure proper certification.
- 4.3.11. Review and approve all explosive movement routes and changes thereto.
- 4.3.12. Be the single point of contact for OO-ALC explosives safety issues.
- 4.3.13. Interpret explosive safety standards.
- 4.3.14. Brief the OO-ALC Commander on quantity distance issues at least semi-annually.
- 4.3.15. Coordinate weapons safety issues involving tenants with the appropriate tenant safety office.
- 4.3.16. Ensure environmental issues are coordinated with OO-ALC/EM.

**Section 4B—Explosives Safety**

**4.4. Exceptions to Provisions of Explosives Safety Criteria.** All requests to depart from any provision of explosive safety criteria will be processed through the unit and forwarded to OO-ALC/SEW for review. A complete justification, including compensatory measures and proposed long term corrective actions with projected costs, will accompany each request. Requests to depart from advisory provisions will be submitted through the functional manager to OO-ALC/SEW for concurrence. Requests to depart from mandatory provisions are reviewed by OO-ALC/SEW and, if considered valid, are forwarded to HQ AFMC with a cover letter signed by the OO-ALC Commander.

**4.5. Responsibilities of Commanders, Directors, and Staff Officers (Including Tenant Units).**

- 4.5.1. Implement an aggressive explosives mishap prevention program within their unit.

4.5.2. Appoint, in writing, explosive safety representatives to direct and coordinate the unit explosives safety program. Provide a copy of this appointment to OO-ALC/SEW. The functional manager will make the appointment. The appointed representative will be the single point of contact between OO-ALC/SEW and the unit for all routine matters relating to explosives safety. The OO-ALC Weapons Safety Office will provide initial training and annual recurring training to these representatives. It will be the representative's responsibility to provide and document explosive safety training for any additional unit representatives and to ensure that those personnel actually involved in explosives operations receives the required training.

4.5.3. Ensure that explosives safety meetings are held monthly and attended by appropriate personnel. These meetings will be documented as to date, attendance, and subject matter discussed. Tenants will hold meetings as directed by their parent command.

4.5.4. Ensure only properly trained personnel work in explosives operations.

4.5.5. Ensure that sufficient notice is provided to OO-ALC/SEW when a meeting/project is scheduled which requires explosive safety review, approval, or participation.

4.5.6. Ensure that all new, locally procured or fabricated equipment used to test or handle explosives material has been properly analyzed and certified for its intended purpose prior to use. Equipment previously certified and currently listed in approved Air Force publications need not be re-certified.

4.5.7. Ensure that no operations involving explosives are conducted by their unit without an approved EOI.

#### **4.6. Responsibilities of Unit Explosives Safety Representative.**

4.6.1. Develop and administer the unit explosives safety program.

4.6.2. Serves as central point of contact for explosive safety within their unit and acts as liaison between OO-ALC/SEW and the unit.

4.6.3. Attends explosives safety interchange meetings conducted by OO-ALC/SEW.

4.6.4. Establish and administer an effective inspection program. Inspection results will be documented and will be subjected to review during OO-ALC/SEW annual explosive safety assessment.

4.6.5. Comply with all mishap notification requirements.

#### **4.7. Responsibilities of 75 ABW Explosives Ordnance Disposal (EOD).**

4.7.1. Attend final pre-test meetings on tests that may require EOD support.

4.7.2. Coordinate with the Test Range Control officer (through the Range Coordination Center) to ensure that any range area to be cleared is closed to all testing activities. Give estimated starting and completion time, as well as altitude needed, to clear closed range area.

4.7.3. Provide escort for personnel whose duties require access to explosives contaminated areas when the situation is safe enough to permit access. Explosive safety specialists assigned to OO-ALC/SEW may enter contaminated areas without escort in the daily performance of their duties.

4.7.4. Clear and decontaminate surface areas of unexploded ordnance that impacted on (or off) range.

4.7.5. Respond to improvised explosives devices (IED) found on base or at Geographical Separated Units as outlined in *HAFB Plan 31-101, Bomb Threats*. Request technical safety assistance, as necessary, from OO-ALC/SEW.

#### ***Section 4C—Missile Safety***

**4.8. Missile Safety.** OO-ALC/SEW) will provide safety staff assistance and coordinate safety activities for missile systems prime at OO-ALC. OO-ALC/SEW will:

- 4.8.1. Provide review, evaluation and consultation of safety requirements during the preparation and accomplishment of Safety Engineering Analyses (SEA).
- 4.8.2. Physically monitor missile modifications and prototypes/first time maintenance activities by OO-ALC depot teams.
- 4.8.3. Approve all procedures, which expose personnel to hazardous environments or operations.
- 4.8.4. Participate in System Safety groups and monitor OO-ALC safety actions resulting from these meetings.

#### **4.9. Responsibilities of the ICBM Product Directorate (OO-ALC/LM) .**

4.9.1. Forward to OO-ALC/SE, notifications and minutes of System Management Conferences and other meetings in which safety related subjects are discussed.

Ensure that Safety Engineering Analyses (SEA) for OO-ALC facilities and personnel are provided to the OO-ALC/SEW for review and coordination of safety requirements.

4.9.2. Establish and coordinate System Safety Group (SSG) meeting to include notification of OO-ALC/SE of dates and agenda. Coordinate safety related actions, involving OO-ALC facilities and personnel, resulting from SSG's with the Safety Office.

#### ***Section 4D—Nuclear Surety***

**4.10. Nuclear Safety .** The Nuclear Safety Officer (NSO) for OO-ALC is assigned to SEW and is responsible to the chief, SEW to administer the OO-ALC Nuclear Safety Program in accordance with *AFI 91-101, Air Force Nuclear Weapons Surety Program*. The NSO will:

- 4.10.1. Ensure the coordination and integration of directorate and tenant nuclear safety programs with the OO-ALC Host Base Nuclear Safety Program.
- 4.10.2. Develop and implement plans, directives, supplements, and other documents as may be necessary in establishing a viable Nuclear Safety Program. Coordinate on all actions correspondence that has a direct impact on nuclear safety.
- 4.10.3. Keep directorates/staff offices/tenant units advised of the status of the nuclear safety program.
- 4.10.4. Consult with the fire chief to ensure the adequacy of training relating to fire fighting techniques for nuclear weapons or components as appropriate.
- 4.10.5. Consult with the Disaster Preparedness Office to ensure that the Disaster Preparedness Plan provides adequate response to mishaps, which may involve nuclear materiel.

- 4.10.6. Monitor provisions to accommodate transient aircraft carrying nuclear components.
- 4.10.7. Develop written procedures/checklists for nuclear safety assessments. Conduct annual nuclear safety assessments as required for all units having activities involving the nuclear safety program. Monitor the actions to correct nuclear safety discrepancies identified during inspections, assessments, or staff visits.
- 4.10.8. Monitor modifications/alterations to nuclear weapons systems for effect on nuclear safe haven.
- 4.10.9. Review and determine the management effectiveness of the Personal Reliability Program (PRP). Attend scheduled PRP meetings.
- 4.10.10. Review and provide nuclear safety staff inputs to operational plans, directives and operating procedures.
- 4.10.11. Monitor the nuclear safety certification program for weapons hardware and the nuclear safety crosscheck analysis for weapons software. Provide safety coordination on recommendations for nuclear safety certification, recommended changes to nuclear safety design and evaluation criteria, recommendations pertaining to hardware/software critical component designations and other significant certification correspondence.
- 4.10.12. Monitor action items assigned by the Nuclear Weapons System Safety Group (NWSSG).
  - 4.10.12.1. Coordinate on initial action agency schedule for compliance and status report.
  - 4.10.12.2. Coordinate requests for slippage of approved schedules, or requests for close out of recommendations.
  - 4.10.12.3. Monitor monthly status reporting.
  - 4.10.12.4. Coordinate on correspondence regarding action-agency activities pertaining to NWSSG studies.

#### **4.11. Responsibilities of Commanders, Directors, Chiefs of Staff Offices and Tenant Units Having Activities Effecting Nuclear Safety.**

- 4.11.1. Develop an aggressive nuclear safety program within their units.
- 4.11.2. Appoint a Nuclear Safety Project Officer (NSPO) for each directorate having responsibility for nuclear capable weapons systems. This NSPO will:
  - 4.11.2.1. Be responsible for the internal nuclear safety program of that unit and interface/coordinate with the OO-ALC NSO (OO-ALC/SEW).
  - 4.11.2.2. Coordinate the nuclear safety certification program nuclear safety crosscheck analysis, and NWSSG action-agency status reports within their unit and with the OO-ALC NSO.
  - 4.11.2.3. Act as the focal point for the correction of any discrepancies found during nuclear safety inspections, surveys, and staff visits.
  - 4.11.2.4. Ensure action is taken to correct nuclear deficiencies identified as a result of Dull Swords, Category I reports, and nuclear mishaps.

4.11.2.5. Ensure that correspondence generated by their unit in reply to or in support of studies, surveys, mishap reports, certification packages, program plans, actions, projects and modifications involving nuclear safety are coordinated with the NSO (OO-ALC/SEW).

4.11.3. If there are positions within the unit that require Personnel Reliability Certification, a PRP monitor will be assigned to coordinate the PRP within that unit. The name of this monitor and his/her alternate will be forwarded to personnel Career Management Section (DPCM) and OO-ALC/SEW.

#### ***Section 4E—Range Safety***

#### **4.12. Range Safety.**

4.12.1. The conduct of all tests and operations at the Utah Test and Training Range (UTTR) must be accomplished in a safe and controlled environment. Every reasonable precaution must be taken to minimize risks to personnel and property. OO-ALC/SEW will provide a qualified explosives safety specialist to serve as Range Safety Officer (RSO) and additional personnel as may be required to support the range activities. The Range Safety Officer will administer and coordinate the range safety program to include all safety disciplines. He/she will also coordinate range safety efforts between OO-ALC units, tenants and other government agencies. He/she will request technical support from ground, flight and system safety as may be required to provide full safety support.

4.12.2. In addition, a qualified explosive safety specialist will be appointed by the Chief of Weapons Safety to serve as the Range Safety Coordinator. He/she will provide range safety technical assistance and representation at Hill AFB. The Range Safety Coordinator (RSC) (at Hill AFB) and the Range Safety Officer at UTTR must establish and maintain an intimate working relationship.

#### **4.13. Responsibilities of Range Safety Officer (OO-ALC/SEW).**

4.13.1. Provide safety assistance and consultation to the range commander and tenant units.

4.13.2. Require that all tests, missions, range clearance operations, projects, or changes to scheduled operations be cleared through the RSO

4.13.3. Require adequate control be established to ensure appropriate clear zones, fall-back distances, personnel shielding or other protective devices/equipment are provided and utilized as required by the test directive governing the specific operation.

4.13.4. Terminate or place a safety hold on any operation that, in his opinion, appears unduly hazardous. This hold will not be lifted until the RSO and the Range Commander is both satisfied that the situation has been corrected.

4.13.5. Ensure all tests or exercises involving the expenditure of munitions that may pose a risk to life or property are not performed unless a hazard analysis is provided. This analysis will provide a risk assessment that will specifically identify the risks and will state what special provisions/safety procedures or equipment will be provided to control the risk. All first time tests or operations must have an explosives safety specialist (OO-ALC/SEW) present.

4.13.6. Review and approve applicable TOs, OIs, and test plans for range peculiar requirements.

4.13.7. Investigate all mishaps occurring on the range, unless other arrangements are approved by the Chief of Weapons Safety.

4.13.8. Coordinate in the selection of drop areas, and munitions test areas to ensure test/target compatibility. Inspect the targets/drop areas for excessive build-up of duds and/or hazardous materials as required.

4.13.9. Ensure that an adequate program of decontamination of munitions and other hazardous materials is accomplished. Monitor explosives disposal and range clearance operations to ensure compliance with approved directives.

4.13.10. Inspect boundaries to ensure proper markings (signs) are posted for hazardous areas. These areas may require EOD escort for personnel whose duties require access to these areas.

4.13.11. Conduct inspections of high interest areas. Conduct spot inspections on all range facilities. Log these inspections in the computerized inspection program.

4.13.12. Maintain a current range map outlining target areas, quarantined areas, explosive storage facilities, explosives operations and clear zones.

4.13.13. Ensure that a record is maintained that provides the location of known duds and munitions that cannot be recovered or destroyed during range clearing operations.

4.13.14. Ensure that a record is kept of all munitions used on the range. This record must identify types of munitions in relation to target areas. It will be used to assist in determining target capabilities for all munitions operations.

4.13.15. Provide full safety support for all munitions flights and operations conducted at the UTTR. Safety support will include:

4.13.15.1. Review and coordination of operations procedures/test directives.

4.13.15.2. The RSO will have the authority to abort a mission or terminate an operation whenever specified safety parameters (i.e. range, space, and range time) are in danger of compromise. In case of particular or unusual test mission, these specified safety parameters may have to be negotiated or established during the mission planning cycle so that mission conduct can be agreed upon prior to mission day.

4.13.15.3. Assist OO-ALC/EM, as needed, with environmental issues involving the range.

#### **4.14. Responsibilities of the Range Commander (75RANS/CC).**

4.14.1. Provide all necessary support to ensure that range safety requirements are complied with.

4.14.2. Ensure adequate security control to prevent unauthorized entry into explosives contaminated areas.

4.14.3. Advise the Director of Operations and RSO of range readiness prior to the start of each test.

#### **4.15. Test Range Safety—General.**

4.15.1. Personnel Safety.

4.15.1.1. Personnel will enter range areas *not earlier* than thirty minutes before sunrise and depart *not later* than thirty minutes after sunset, unless specific authority is granted by the Range Control.

4.15.1.2. Personnel will be excluded from hazardous areas when their duties do not require their presence or when they do not have authorized escorts from EOD.

4.15.1.3. Firearms and ammunition are not permitted in the test areas unless duties specifically require the possession and use of firearms. Firearms will not be discharged on the range for any reason, other than under an approved test directive or in the line of duty.

4.15.1.4. While conducting hazardous operations, one person will not be permitted to work alone or on a location where assistance from a fellow worker is not immediately available.

4.15.1.5. Intoxicating beverages or persons under the influence of intoxicants or drugs are not permitted in work areas or test areas.

4.15.1.6. All mishaps are to be reported immediately to their supervisor. The supervisor will make a detailed report to the RSO and the Commander of all mishaps that involve injury to personnel or damage to equipment, including personnel and equipment from other units. The RSO will notify other appropriate agencies.

4.15.1.7. Test range personnel will attend range safety meetings held monthly by an appropriate supervisor and devoted exclusively to the discussion of range safety. Reports of attendance will be submitted to the RSO using the AFMC Form 316.

4.15.1.8. Range fire regulations and other standard safety practices will be observed.

4.15.1.9. Each individual or person in charge of specific operations requiring access to the range will proceed only after having obtained permission from the range control office.

4.15.1.10. Personnel should be constantly alert to any unsafe conditions or practices, reporting them to their supervisors and RSO.

4.15.1.11. Inexperienced personnel should be advised of safe methods and procedures, warned of hazards, and closely supervised when around dangerous materials or equipment.

4.15.1.12. All personnel should learn first aid, especially for hazards involved in their jobs. Each person should know how and where medical help may be obtained.

4.15.1.13. Access to an active range area will not be granted unless:

4.15.1.13.1. Clearance has been obtained from the Range Control Office.

4.15.1.13.2. Direct communications are maintained throughout the entire operation.

#### 4.15.2. Protective Clothing/Equipment.

4.15.2.1. Shoes, full-length trousers, and shirts with sleeves covering at least the upper arm will be worn while working on the range. Exceptions may be granted by the Range Commander.

4.15.2.2. Approved goggles, safety shields, or safety glasses will be worn when tasks create danger of eye injury.

4.15.2.3. Gloves should be worn when handling rough containers.

4.15.2.4. ANSI approved head protection will be worn by all personnel when overhead work is in progress and also when working in the roll transfer building.

4.15.2.5. Respirators will be worn if any contamination is present that may affect the respiratory system. OIs will identify when respiratory protection is required.

4.15.2.6. During certain weapon testing, special protective clothing may be required by the OI.

#### **4.16. Government Vehicle Operations at the Range.**

##### **4.16.1. Reporting Range Vehicle Mishaps.**

4.16.1.1. RSO and range security police will be notified immediately of all vehicle mishaps occurring on the test range, and those involving range vehicles that occur off range. The RSO will notify OO-ALC/SEG.

4.16.1.2. The range police will ensure that appropriate pictures of the mishap are taken before vehicle removal. In addition, they will ensure that an SF 91, *Operator's Report of Motor Vehicle Accident*, is filled out and delivered to VCO within 3 workdays.

4.16.1.3. Government vehicles involved in any type mishap on range will not be moved, except as necessary for the removal of the injured or until released by the appropriate investigative authority, for example, range security police or safety representative.

#### **4.17. Explosive Safety Practices At the Test Range.**

4.17.1. A red "Range" flag will be displayed whenever an EOD operation is in progress at the disposal area.

4.17.2. Live ammunition will be loaded into gun chambers for test firing purposes only, and must be covered by an approved OI. (Range security police and explosives escorts, in the performance of their duties, are exempt from this requirement.)

4.17.3. Accidental dropping of any rocket, booster, or any other type of munitions will be reported as soon as possible to the Range Safety Officer.

4.17.4. All drivers of vehicles transporting explosives onto the UTTR will stop at the vehicle holding and inspection station, call the administration building and request that an inspection be performed. Drivers will not enter the range complex until the required inspection is completed. No stops, other than emergency, will be made between the vehicle holding area and the driver's destination.

4.17.5. The following fallback distances are established to provide guidance for tests involving bomb drops and static bomb detonations. These distances are considered "minimum safe" and may be increased for certain tests containing special or additional hazards. Should certain bomb drop or static bomb detonation test parameters be incompatible with these fall-back distances, special attention by range and explosives safety personnel will be provided to attempt accommodation of these unusual test requirements. Construction of protective structures may be required as outlined in *AFMAN 91-201, Explosives Safety Standards, paragraph. 3.27*.

4.17.5.1. Practice and Inert Bombs. Fall-back distance for personnel will not be less than 1,500 yards for low-altitude drops (up to 6,000 feet AGL) on each side of ground Zero, extending on a line parallel to the flight path of the aircraft, from the arming point to at least three miles beyond both the safing point of the weapon system and ground zone.

4.17.5.2. Live Bombs. Fall-back distance for personnel will not be less than 2,000 yards for low altitude drops (up to 6,000 feet AGL), and 3,000 yards for high-altitude drops (above 6,000 feet AGL) on each side of ground Zero, extending on a line parallel to the flight path of the aircraft, from the arming point to at least three miles beyond both the safing point of the weapon system and ground Zero.



4.17.6. Following are additional requirements governing training flights on scoreable range (Eagle Range).

4.17.6.1. All flights on Eagle Range will be under the direct control of a qualified unit Range Officer, and under radar surveillance from Clover Control. The Range Officer will be certified in writing by the Commander. Certification will be sent to Range Control and the RSO. Certification will be accomplished at least annually or as required due to change of personnel.

4.17.6.2. The Range Officer will personally supervise and direct all participating aircraft in the bombing and gunnery pattern at Eagle Range. They will be responsible for the safety of all personnel and equipment in the Eagle Range and its lead-in and overrun areas.

4.17.6.3. A "clear zone" free of all personnel and equipment will be maintained during all bombing and gunnery missions.

## Chapter 5

### SYSTEMS SAFETY

**5.1. Applicability.** This chapter applies to all directorate industrial programs, including *DOD 5000.2-R acquisition program*, activities that may directly affect the safety of OO-ALC systems. The content of this OO-ALC system safety program plan includes support of test and materiel safety (DB-10) programs.

**5.2. Objective of Program at OO-ALC.** The program provides application of system safety principles on all systems, subsystems, facilities, and processes throughout all phases of acquisition programs. A system safety program places emphasis on all levels of management, to ensure an optimum degree of safety throughout DOD life-cycle activities. The OO-ALC programs primary objective is to identify, assess, and control safety hazards to acceptable levels of risk; while maintaining cost effectiveness and mission requirements. Management is responsible to ensure system safety staffs provide them the technical approach necessary to build good management decisions regarding acceptable safety risk.

**5.3. Responsibilities of the System Safety Office (SES).**

- 5.3.1. Prepare and publish OO-ALC instructions, directives, supplements, and policies pertaining to the requirements and conduct of system safety programs.
- 5.3.2. Coordinate and assess system safety program.
- 5.3.3. Review, coordinate and assist functional level acquisition and engineering program activities, related to system safety programs.
- 5.3.4. Review and coordinate, "Unacceptable" or "Undesirable" risk assessments requiring Air Force Acquisition Executive or designee approval, prior to AFMC/SE review.
- 5.3.5. Review, coordinate and approve functional organization System Safety Program Plans (SSPP).
- 5.3.6. Provide consultation services to directorate contractor efforts when requested.
- 5.3.7. Coordinate the AFMC Forms 299 requiring system safety efforts.
- 5.3.8. Conduct annual meetings and Staff Assistance Visits (SAV) with directorate system safety personnel.
- 5.3.9. In accordance with *AFI 91 and 99 series* requirements, participates as advisor or member to system safety, test safety review, and materiel safety program boards and groups.
- 5.3.10. Coordinate AFMC/SE materiel safety DB-10 program elements with OO-ALC directorate staffs.

**5.4. Responsibilities of Functional Managers.** Each directorate with engineering and program management responsibilities will establish a system safety program that effectively manages safety risk.

- 5.4.1. Appoint a directorate System Safety Program Coordinator (SSPC) to coordinate program need.
- 5.4.2. Establish full-time system safety programs, at the commensurate functional level, for the appropriate acquisition program level. For other industrial activities; establish system safety programs commensurate with program scope.

5.4.3. Appoint full or part-time System Safety Program Managers (SSPM) that commensurate with program efforts.

5.4.4. Coordinate all “Undesirable” or “Unacceptable” residual hazards, with SSPMs, OO-ALC/SE and OO-ALC/CC. Use AF Form 1768 for this coordinating activity.

5.4.5. Apprise OO-ALC/SE of program changes or needs.

5.4.6. Single Managers will ensure safety staffs coordinate on internal programs to ensure integration of System Safety Program requirements.

5.4.7. Ensure at least one MIL-STD-882C (or equivalent) tasking for all acquisition programs and projects with unknown effects on a system and processes.

5.4.8. Each functional manager or designee will develop and maintain a detailed Mil Std 882 (current version or equivalent) System Safety Program Plan (SSPP). The SSPP shall include the requirements of AFI 91-202, Quality Air Force Assessment (QAFA) format, description of features and benefits, and the system safety management and technical approach that will minimize OO-ALC/SES oversight.

5.4.9. Ensure SSPMs coordinate the SSPP with OO-ALC/SES annually.

**5.5. Responsibilities of Project, Workload or Test Managers.** Managers responsible for overall successful completion of critical industrial processes or test activities will support and coordinate the risk acceptance process. Risk acceptance “approval authority” begins at the manager level. Managers are responsible to fully understand Section 4 of Mil Std 882 (current version or equivalent).

5.5.1. Managers will review and comment on SSPP annual updates.

5.5.2. Coordinate all “undesirable” or “unacceptable” residual hazards, as in paragraph 5.3.4. For other residual risks, ensure appropriate coordination with the SSPM and OO-ALC/SE.

5.5.3. Coordinate appropriate acquisition program activities with the SSPM when involving OO-ALC systems.

5.5.4. Develop THAs when appropriate.

**5.6. Responsibilities of the System Safety Program Manager (SSPM).** Establish and maintain a tailored System Safety Program (SSP) in accordance with MIL-STD-882 (current version or equivalent).

5.6.1. Integrate materiel and test safety program requirements within the plan; consistent with identification, assessment and control of safety hazards.

5.6.2. Integrate SSPs with other directorate engineering and program milestones.

5.6.3. Identify and assess safety hazards and risks throughout the life of the program.

5.6.4. Incorporate system safety requirements and design criteria into all program documents in accordance with other program requirements such as reliability, maintainability, human factors and test (*AFI 99 Series*).

5.6.5. Develop system safety assessments for design and program reviews.

5.6.6. Develop tracking procedures for all identified hazards. Document management decision, at all levels, for acceptance of residual risks.

- 5.6.7. Develop quantitative system safety criteria and operating limits in collaboration with the using or operational command.
- 5.6.8. Establish when appropriate or required, System Safety Groups (SSG) and System Safety Working Groups (SSWG).
- 5.6.9. Assist managers in developing test hazard analyses (THAs) or develop THAs when appropriate.
- 5.6.10. When appropriate, act as test safety review authorities.
- 5.6.11. Assist management staffs in materiel safety program database (DB) - 10 activities.
- 5.6.12. Participate in directorate acquisition program activities related to safety of systems.
- 5.6.13. Evaluate Non-Developmental Item (Off-the-Shelf) acquisitions before installation or use within a critical industrial process or test activity.
- 5.6.14. Review AFMC Form's 299 and coordinate required system safety efforts. Require the unit to attach the AFMC Form 299 to procurement requests.
- 5.6.15. SSPMs shall maintain appropriate system safety files. Maintain system safety documents for the system, facility or process lifetime.
- 5.6.16. When designated, develop, update and coordinate SSPPs.

## **5.7. Responsibilities of the System Safety Program Coordinator (SSPC).**

- 5.7.1. Identify system safety, test safety and materiel safety programs need to functional managers.
- 5.7.2. Coordinate formal system safety training requirements with OO-ALC/SES.

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Vice Commander

**Attachment 1****TERMS EXPLAINED**

**Air Force Occupational Safety and Health (AFOSH) Standards.** Standards published by the Air Force that prescribe the conditions and methods necessary to provide a safe and healthful working environment.

**Functional Managers.** Commanders and directors of two- and three-letter units who can acquire and commit resources for the abatement of safety hazards.

**Hazard or Deficiency.** A condition, procedure, or practice that creates a potential for producing death, injury, occupational illness, or equipment or property damage.

**Hazard or Deficiency Abatement.** Eliminating or permanently reducing a hazard by complying with safety requirements or taking protective measures.

**Interim Control Measure.** Temporary action taken to reduce the degree of risk associated with a hazard or deficiency pending completion of an abatement project.

**Mishap.** An unplanned or unsought event or series of events, resulting in death, injury, occupational illness, or damage to or loss of equipment or property.

**OO-ALC System.** A composite of personnel, procedures, materials, tools, equipment, facilities, and software used individually or together to achieve a specific OO-ALC production, support or mission requirement.

**Risk Assessment.** An evaluation of possible loss in terms of hazard or deficiency severity and mishap probability.

**Risk Assessment Code (RAC).** An expression of the degree of risk in terms of hazard or deficiency severity and probability of occurrence.

**Safety Professional.** A Personnel Management recognized and assigned position in the GS/GM-018 Safety Specialist or 803 Safety Engineer or an active duty member in 1SOX1 career field.

**Safety Representative.** An additional duty person performing safety duties.

**Unit.** Directorates, squadrons, detachments, or other units at the two- and three-letter level.

**REFERENCES**

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Investigating and Reporting US Air Force Mishaps*

AFI 91-207, *USAF Traffic Safety Program*

AFI 91-301, *Air Force Occupational & Environmental Safety, Fire Prevention, & Health (AFOSH) Program*

AFMAN 91-201, *Air Force Explosives Safety Standards*